(b) an amino acid sequence having greater than 60% amino acid identity with the C-terminal seven-cysteine skeleton of human OP-1, amino acids 38-139 of SEQ ID NO: 5,

(c) an amino acid sequence defined by Generic Sequences 1, 2, 3, 4, 5 or 6 (SEQ ID NOs: 1, 2, 3, 4, 30 or 31), or

(d) an amino acid sequence defined by OPX (SEQ ID NO: 29).

23. (**Amended**) A method for reducing tissue damage associated with ischemia-reperfusion injury in a human, the method comprising the step of providing to an injured tissue a therapeutic concentration of a morphogen sufficient to alleviate the damage associated with said injury, wherein said step of providing a therapeutically effective morphogen concentration to said injured tissue comprises administering to said human an agent that stimulates *in vivo* a therapeutically effective concentration of an endogenous morphogen having an amino acid sequence selected from at least one of

(a) an amino acid sequence sharing at least 70% homology with the C-terminal seven-cysteine skeleton of human OP-1, amino acids 38-139 of SEQ ID NO: 5,

(b) an amino acid sequence having greater than 60% amino acid identity with the C-terminal seven-cysteine skeleton of human OP-1, amino acids 38-139 of SEQ ID NO: 5,

(c) an amino acid sequence defined by Generic Sequences 1, 2, 3, 4, 5 or 6 (SEQ ID NOs: 1, 2, 3, 4, 30 or 31), or

(d) an amino acid sequence defined by OPX (SEQ ID NO: 29).

49. (**Amended**) A method for reducing tissue damage associated with hyperoxia injury in a human, the method comprising the step of providing to an injured tissue a therapeutic concentration of a morphogen sufficient to alleviate the damage associated with said injury, wherein said step of providing a therapeutically effective morphogen concentration to said injured tissue comprises administering to said human an agent that stimulates *in vivo* a therapeutically effective concentration of an endogenous morphogen having an amino acid sequence selected from at least one of

(a) an amino acid sequence sharing at least 70% homology with the C-terminal seven-cysteine skeleton of human OP-1, amino acids 38-139 of SEQ ID NO: 5,

(b) an amino acid sequence having greater than 60% amino acid identity with the C-terminal seven-cysteine skeleton of human OP-1, amino acids 38-139 of SEQ ID NO: 5,

(c) an amino acid sequence defined by Generic Sequences 1, 2, 3, 4, 5 or 6 (SEQ ID NOs: 1, 2, 3, 4, 30 or 31), or

(d) an amino acid sequence defined by OPX (SEQ ID NO: 29).

Please add the following new claims:

50. (**New**) The method of claim 3, wherein the tissue destructive effects associated with an inflammatory response are the result of a chronic or acute inflammatory disease.

51. (**New**) The method of claim 3, wherein the tissue destructive effects associated with an inflammatory response are the result of an autoimmune disease.

52. (**New**) The method of claim 50, wherein the chronic or acute inflammatory disease comprises a disease of joints.

53. (**New**) The method of claim 52, wherein the disease of the joints is selected from osteoarthritis or rheumatoid arthritis.

54. (**New**) The method of claim 50, wherein the chronic or acute inflammatory disease comprises a lung disease.

55. (**New**) The method of claim 54, wherein the lung disease is selected from at least one of bronchitis, emphysema, idiopathic pulmonary fibrosis, adult respiratory distress disorder, or asthma.

56. (**New**) The method of claim 50, wherein the chronic or acute inflammatory disease comprises a kidney disease.

57. **(New)** The method of claim 56, wherein the kidney disease is glomular nephritis.

58. **(New)** The method of claim 50, wherein the chronic or acute inflammatory disease comprises a skin disease.

59. **(New)** The method of claim 58, wherein the skin disease is selected from psoriasis or dermatitis.

60. **(New)** The method of claim 50, wherein the chronic or acute inflammatory disease comprises a disorder of gastrointestinal mucosa.

61. **(New)** The method of claim 60, wherein the disorder of gastrointestinal mucosa is an inflammatory bowel disease or oral mucositis.

62. **(New)** The method of claim 61, wherein the inflammatory bowel disease is selected from at least one of ulcerative colitis, ileitis, Crohn's disease, or proctitis.

63. **(New)** The method of claim 50, wherein the chronic or acute inflammatory disease comprises a vascular disease.

64. **(New)** The method of claim 63, wherein the vascular disease is atherosclerosis or vasculitis.

65. **(New)** The method of claim 51, wherein the autoimmune disease is selected from diabetes or multiple sclerosis.

66. **(New)** The method of claim 23, wherein administering said agent is conducted after onset of ischemia but before reperfusion.

67. **(New)** The method of claim 23, wherein administering said agent is conducted before onset of ischemia.

68. (**New**) The method of claim 23, wherein said injured tissue is selected from at least one of lung tissue, neural tissue, cardiac tissue, or renal tissue.

69. (**New**) The method of claim 23, wherein said ischemia-reperfusion injury is associated with a condition selected from at least one of cardiac arrest, pulmonary embolism, renal arterial occlusion, coronary artery occlusion, myocardial infarction, occlusive stroke, cerebral embolism, or asphyxiation.

70. (**New**) The method of claim 23 or 49, wherein said tissue damage is associated with a tissue graft or organ transplant.

The claims presented above incorporate changes as indicated by the marked-up versions below.

3. (**Amended**) A method for alleviating tissue destructive effects associated with an inflammatory response to an injured tissue in a mammal, comprising administering to said mammal an agent that stimulates *in vivo* a therapeutically effective concentration of an endogenous morphogen having an amino acid sequence selected from at least one of

(a) an amino acid sequence sharing at least 70% homology with the C-terminal seven-cysteine skeleton of human OP-1, amino acids 38-139 of SEQ ID NO: 5,

(b) an amino acid sequence having greater than 60% amino acid identity with the C-terminal seven-cysteine skeleton of human OP-1, amino acids 38-139 of SEQ ID NO: 5,

(c) an amino acid sequence defined by Generic Sequences 1, 2, 3, 4, 5 or 6 (SEQ ID NOs: 1, 2, 3, 4, 30 or 31), or

(d) an amino acid sequence defined by OPX (SEQ ID NO: 29).

23. (**Amended**) A method for reducing tissue damage associated with ischemia-reperfusion injury in a human, the method comprising the step of providing to an injured tissue a therapeutic concentration of a morphogen sufficient to alleviate the damage associated with said injury, wherein said step of providing a therapeutically effective morphogen concentration to said